Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)
U.S. Department of the Interior Bureau of Land Management
Coos Bay District

FY2003 Culvert Replacements
DNA No. 13 to EA OR125-97-12

A. Describe the Proposed Action:

The proposal is to modify or replace culverts at various locations in the Umpqua Field Office under federally controlled roads by the Coos Bay District Office, Bureau of Land Management (BLM) and Douglas County Controlled roads. The purpose of the proposed actions is to restore and/or improve access to cold water refugia and spawning and rearing habitat for anadromous and resident salmonids. These actions may enhance sediment, large woody debris and nutrient transport through the stream crossings. The culverts will be designed to pass the Q_{100} flood. The effects of culvert replacements were discussed in the original EA (EA OR125-97-12):

South Sister 13B Culvert Replacement (T. 20S., R. 08W., Section 13)

The proposal is to replace the existing undersized culvert and overflow pipe with one culvert designed to pass a wide variety of aquatic organisms. Grade control structures (boulder weirs) would be placed below the culvert to raise the water level, helping to improve juvenile fish and amphibian passage. Replacing the existing culvert will improve juvenile and adult fish passage for resident and anadromous fish. Approximately 0.5 miles of habitat will be opened, and a culvert outlet drop (4 foot) will be eliminated as a result of this culvert replacement. Furthermore, it can be expected that movements of less mobile aquatic species, especially amphibians, would also benefit from this culvert replacement. Installation of a culvert sized to the appropriate channel dimensions would allow for reestablishing a more natural sediment and large wood routing regime.

Cedar Creek Culvert Replacement (T. 22S., R. 08W., Section 3)

The proposal is to replace the existing culvert with a culvert designed to pass a wide variety of aquatic organisms. Replacing the existing culvert will improve juvenile and adult fish passage for resident and anadromous fish. Acces to approximately 1.70 miles of habitat will be improved and an undersized culvert that results in high velocity flows will be eliminated as a result of this culvert replacement. Furthermore, it can be expected that movements of less mobile aquatic species, especially amphibians, would also benefit from this culvert replacement. Installation of a culvert sized to the appropriate channel dimensions would allow for reestablishing a more natural sediment and large wood routing regime.

Soup Creek 23-9-19.0 Culvert Replacement (T. 23S., R. 09W., Section 21)

The proposal is to replace an existing culvert on Soup Creek under the BLM road # 23-9-19.0. The new culvert will be designed to pass a wide variety of aquatic organisms. A grade control structure (boulder weir) would be placed below the culvert to raise the water level enough to backwater the outlet of the culvert, which will improve juvenile fish and amphibian passage. Replacing the existing culvert will improve upstream migration access for all aquatic species. Acces to approximately 2.25 miles of habitat will be achieved and an undersized culvert with a plunge drop that prevents upstream migration by aquatic organisms will be eliminated. Furthermore, it can be expected that movements of less mobile aquatic species, especially amphibians, would also benefit from this culvert replacement. Installation of a culvert sized to the appropriate channel dimensions would allow for reestablishing a more natural sediment and large wood routing regime.

West Fork Mosetown Creek Culvert Replacement (T. 21S., R. 08W., Section 16)

The proposal is to replace the existing culvert on the West Fork Mosetown Creek with a culvert designed to pass a wide variety of aquatic organisms. Replacing the existing culvert will improve juvenile and adult fish passage for resident and anadromous fish. Access to approximately 1.30 miles of habitat will be improved and an undersized culvert that results in a high outlet drop and high within culvert flow velocities will be eliminated as a result of this culvert replacement. The new culvert design will allow for natural substrate to collect within the bottom of the culvert. A natural substrate bottom provides friction and reduced streamflow velocities which ease upstream migration for several aquatic species. Furthermore, it can be expected that movements of less mobile aquatic species, especially amphibians, would also benefit from this culvert replacement. Installation of a culvert sized to the appropriate channel dimensions would allow for reestablishing a more natural sediment and large wood routing regime as well as restoring hydrologic function.

B. Land Use Plan (LUP) Conformance.

Coos Bay District Record of Decision and Resource Management Plan (May, 1995)

- The proposed action is in conformance with the applicable LUPs, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (Objectives, terms, and conditions):

The Aquatic Conservation Strategy[1] (ACS) was developed to restore and maintain the ecological health of the watershed and aquatic ecosystems contained within them on public lands. The strategy would protect salmon and steelhead habitat on federal lands managed by the Forest Service and the and the Bureau of Land Management within the range of Pacific Ocean anadromy (*Coos Bay District RMP* ROD, 1994, Standards and Guidelines, p. B-9).

C. Identify applicable NEPA documents and other related documents that cover the proposed action.

Fish passage projects are addressed in BLM EA OR125-97-12, Jobs-in-the-Woods Aquatic Organism Passage (approved June 23, 1997).

On August 8, 2001 the Coos Bay District, BLM received an ammended version of the July 12, 2001 Biological Opinion (BO) (OSB2001-0070-PC-AM) from NMFS authorizing certain "likely to adversely affect" (LAA) actions to occur on federal lands. Included in this BO are "culvert upgrades" and "culvert replacements."

D. NEPA Adequacy Criteria.

1. Is the current proposed action substantially the same action (or as a part of that action) as previously analyzed? Is the current proposed action located at a site specifically analyzed in an existing document?

The Proposed actions are not located at sites specifically identified in the EA; however, the design features and anticipated environmental consequences of the projects are substantially the same as those for sites analyzed in the existing NEPA document. The EA analyzed the replacement of culverts at various locations across the Umpqua Field Office; therefore, a broad range of affected environments and environmental consequences were analyzed. The ground-disturbing activities, impacts to water quality, project timing, and duration of work involved in these projects are essentially the same.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the current proposed action, given current environmental concerns, interests, and resource values?

The referenced EA contains a No Action and Proposed Action Alternative. Due to the structural conditions of the selected culverts, the major road use/needs, the presence of listed fish species, cooperative efforts with watershed associations, and funding limitations, there were few opportunities for additional alternatives to be considered. The selected alternative was deemed to be the most appropriate to ensure long-term viability. No additional environmental concerns, interests, or resource values are known to be present at the current proposed action sites that would prompt the formation of additional alternatives.

3. Is the existing analysis valid in light of any new information or circumstances?

No new information or circumstances are known which would affect the validity of the existing analysis. The listing status and consultation requirements for special status fish species is complex, and subject to change within short time periods. Therefore, a Coos Bay District fisheries biologist will need to assess the status of consultation requirements for each project prior to awarding contracts to begin work.

4. Do the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the current proposed action?

The methodology and analytical approach used in the EA are appropriate to the proposed actions. The culvert replacements analyzed were designed by BLM engineers and involve similar stream channel and environmental conditions. The extent and duration of the projects are expected to be substantially the same for the culvert replacements, and less for the culverts that involve the placement of instream structures as modifications.

5. Are the direct and indirect impacts of the current proposed action substantially unchanged from those identified in the existing NEPA document(s)? Does the existing NEPA document analyze site-specific impacts related to the current proposed action?

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[1] The appropriate landscape scale for evaluating the consistency of individual and groups of projects withe the ACS is the watershed, corresponding withe "fifth-field" hydrologic unit code (HUC) as defined in the "Federal Guide for Ecosystem Analysis at the Watershed Scale."

Based on review by an interdisciplinary team (listed below in section E), the anticipated direct, and indirect effects of the proposed action are substantially the same as identified in the EA. While the existing NEPA document does not analyze site-specific impacts of the current proposed action, the existing environmental factors, design features, and anticipated environmental consequences are expected to be the same or less.

6. Are the cumulative impacts that would result from implementation of the current proposed action substantially unchanged from those analyzed in the existing NEPA document(s)?
Because the structures are designed to improve fish passage for all aquatic organisms, the streams are similar in size, and the work will occur during low-flow conditions during the instream work period (as designated by the Oregon Department of Fish and Wildlife), the short-term and cumulative impacts would be substantially unchanged.

7. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?
No comments were received from the public or other agencies concerning the NEPA document. Other than location, the proposed projects are essentially the same as those analyzed in the EA.

E. Interdisciplinary Analysis:

Name	Title
Tim Barnes	Soil Scientist/Geologist
Mike Haggerty	Hydrologist
John Chatt	Wildlife Biologist
Aimee Hoefs	Fisheries Biologist
Steve Samuels	Archaeologist
Jennifer Sperling	Botanist
Scott Knowles	Port-Orford-cedar/Noxious Weed/Environmental Justice Coordinator
Tim Votaw	Hazardous Materials Specialist
Tom Wilczek	Engineer

Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA.

Conclusion Recommended by:	NRSA: Kathy Wall	Date: 07/10/02
	NRSA: Ralph L. Thomas	Date: 07/11/02
	NRSA: Steven D. Fowler	Date: 07/15/02
Conclusion Approved by:	Umpqua Field Manager: */s/ Kathy Wall, Acting*	
	Date: 07/15/02	

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision.

Culvert Modification/Replacements: Consistency with the Aquatic Conservation Strategy

Objective 1: Maintain and restore the distribution, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

The placement of culverts will maintain, and may restore or improve functions such as flow or sediment routing at the watershed or landscape scale.

Objective 2: Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependant species.

The replacement of culverts and modifications to improve fish passage for fish and other aquatic-dependent species will improve the connectivity of stream channels through the correction of barriers created when road construction occurred.

Objective 3: Maintain and restore the physical integrity or the aquatic system, including shorelines, banks, and bottom configurations.

Improving and increasing the capacity of culverts reduces the potential for chronic and catastrophic erosion, and road failures which can degrade downstream habitats and channels as a result of excessive sediments and channel scouring events (debris torrents, slides, etc.). Streambanks in the vicinity of the projects will be impacted in the short-term, but design features for construction activities will improve stream bank conditions in the long-term.

Objective 4: Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

Increasing the capacity of culverts can reduce existing sediment sources and reduce the potential for chronic and catastrophic erosion, and road failure which can result in excessive sediment delivery to channels. Due to the spatial and temporal distribution of the culvert locations, short-term sediment pulses affecting water quality from these activities have negligible negative impacts when assessed at the Fifth Field Watershed scale. In some cases, the improvements will likely reduce the overall sediment delivery.

Objective 5: Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

Culvert replacements and modifications may result in pulses of sediment delivery and turbidity during construction and if rain events occur during or shortly after work is done. However, these pulses are generally small, short-term (hours to 1-2 days), and temporally and spatially distributed so that overall sediment regimes are maintained. Due to the spatial and temporal distribution, short-term sediment pulses from these activities have negligible negative impacts when assessed at the Fifth Field Watershed scale. Increasing the capacity of culverts can reduce long-term sedimentation and road failures which can degrade downstream habitats and channels as a result of excessive sediments and channel scouring events.

Objective 6: Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

The proposed actions are not likely to have an effect on instream flows.

Objective 7: Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

The proposed actions will have no effect on the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

Objective 8: Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

The replacement of culverts will disturb riparian vegetation in the immediate vicinity of the projects. However, the vegetation management activities affect a small portion of the riparian reserves and species composition and structural diversity of plant communities along stream bank channels will be maintained. Increasing the capacity of the culverts will likely reduce streambank erosion in the long-term.

Objective 9: Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

Improving passage will restore access to habitat previously inaccessible due to improperly placed culverts and help maintain well-distributed populations of aquatic and riparian dependent species.